EXHIBIT G

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¶ In this note on the history of automobile distribution methods in the United States, Dr. Marx examines the development of franchised dealerships. He traces the changes in the nature of consumer demand and the growing complexity in relations between manufacturers and their sales force that led to the predominance of the independent dealer franchise in the automobile "distribution channel."

In the United States, automobiles are currently sold through an elaborate system of 20,841 independent franchised dealers (Table 1). The franchise agreement between the manufacturer and the dealer spells out the numerous sales and service responsibilities of each. There are no fees for the franchise, which is a nonassignable, personal services contract awarded to a qualified dealer, who is required to take an active part in the operation of the dealership. The franchise is for a specific location, but dealers can sell vehicles to any customer anywhere, at any price they negotiate. The dealer can also sell vehicles produced by other manufacturers.

This complex franchised dealer system has not always been the primary method of distribution in the automobile industry. It evolved, in response to changing economic conditions, from the very simple distribution system in use in the early years of the century. This note describes the distribution system and the structure of the automobile industry in two periods, from 1900 to 1920, and the 1950s. An explanation of the linkages between these two elements in the automobile industry suggests an analytical framework for interpreting the effects of industry changes on distribution systems in other industries as well.

DISTRIBUTION TO THE 1920S

During the first two decades of this century, virtually every type of distribution was tried in the automobile industry. Manufacturers sold vehicles directly through factory stores, and by mail order and con-

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signment arrangements, and indirectly through retail department stores, traveling salesmen, and wholesale distributors. Franchising also dates back to the earliest days of the industry, with William E. Metzger of Detroit having obtained the first franchise, for a steamer, in 1898. As shown in Figure 1, an automobile manufacturer might sell vehicles through wholesale distributors, who resold to retail dealers as well as to final consumers; through factory-owned branches that sold directly to consumers and retail dealers; and directly to retail dealers. The primary distribution channel during this period, however, was the wholesale distributor, who often had a large, exclusive sales territory.

There were relatively few distribution problems during the first two decades of the century. The primary problem was producing enough vehicles to meet the steadily increasing demand.2 The relationships between manufacturers and distributors were thus little more than simple market exchanges covering prices and quantities. Manufacturers and their dealers (primarily wholesalers) typically worked on shortterm contracts (usually for one year, terminable by either party with thirty days' notice) in which all of their respective responsibilities were spelled out on a single page. Dealers provided very limited showroom or service and repair facilities, provided little financing or product promotion, and carried limited vehicle and parts inventories. Warranty service applied only to those parts and components produced by the manufacturer. An Oakland Motor Car Company warranty agreement in 1908 stipulated: "This agreement does not cover defective tires, rims, coils, radiators, and other equipment not manufactured by the Oakland Motor Car Company. All claims must be made by said dealer on the respective manufacturers of said tires, rims, coils, radiators, and other parts."3

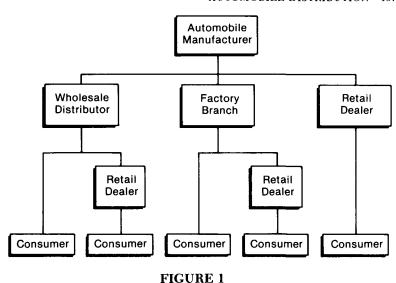
DISTRIBUTION IN THE 1950S

By the 1950s, the simple market relationships that characterized the early distribution channels in the automobile industry had evolved into a complex franchised dealer system. The manufacturers assumed the functions of the wholesale distributors, many of whom became franchised, retail dealers. These dealers were now required to make substantial investments in facilities, service equipment, and vehicle and parts inventories to satisfy consumer demand. The quality of the deal-

¹ D. N. Thompson, Franchise Operations and Antitrust (Lexington, Mass., 1971), 20.

Alfred P. Sloan, Jr., My Years with General Motors (New York, 1965), 282.
 Thomas G. Marx, "Automobile Distribution," unpublished paper.

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Automobile Distribution Systems, 1900-20

erships became more important than the number. As shown in Table 1, the total number of dealerships declined from a peak of 53,125 in 1927 to 46,821 in 1950, and continued to drop steadily thereafter, to 20,841 by 1 January 1984. Numerous changes were made in the franchise agreement from the late 1920s through the early 1950s. Standardized operating, inventory, financial, and ten-day sales reports were developed to gather data on consumer preferences, future purchase intentions, and vehicle inventories (1927-30). Carry-over allowances (a percentage of the list price of vehicles in stock) were provided on previous-model-year cars still in inventory when new models were introduced (1930). The manufacturers also introduced longer-term contracts and agreed to repurchase unused parts and accessories, inventories, and specialized tools, signs, and equipment, and to help the dealer locate a purchaser for his premises upon termination of a dealership (1935-40). Finally, the manufacturers introduced dealer relations boards (1938) and independent umpires (1955) to referee disputes between manufacturers and dealers to ensure that dealers' equities received fair consideration in all relations with the manufacturer.

Manufacturers began to require all dealers to provide adequate promotional and service support for the products they sold. To ensure the provision of adequate repair and warranty services, manufacturers be-

TABLE 1
TOTAL U.S. PASSENGER CAR DEALERSHIPS
1923–84

YEAR (1 JAN.)	NUMBER OF DEALERSHIPS	YEAR (1 JAN.)	NUMBER OF DEALERSHIPS
1984	20,841*	1962	31,331
1983	$20,799^{a}$	1961	32,482
1982	$21,680^{b}$	1960	33,658
1981	21,772	1959	35,077
1980	23,379	1958	37,188
1979	24,051	1957	37,982
1978	24,147	1956	41,018
1977	24,268	1955	40,374
1976	24,453	1954	41,910
1975	24,980	1953	45,191
1974	25,349	1952	46,014
1973	25,441	1951	47,543
1972	25,621	1950	46,821
1971	26,126	1949	49,173
1970	27,071	1948	46,092
1969	27,486	1947	45,580
1968	27,784	1945	30,110
1967	28,422	1940	39,258
1966	30,278	1935	35,977
1965	30,691	1930	51,560
1964	30,827	1927	53,125
1963	30,853	1923	43,588

Source: Automotive News (various issues).

gan requiring dealers to maintain sufficient facilities, tools, equipment, parts, and trained personnel to service the vehicles they sold, at the same time introducing a wide range of incentives to encourage dealer compliance. The manufacturers agreed to repurchase specialized tools, equipment, and parts upon termination, and gave dealers an obsolescence allowance equal to a percentage of annual parts purchased to encourage them to carry an adequate stock. The manufacturers also began providing substantial training for dealer mechanics and service personnel. General Motors, for example, established a national network of thirty dealer service training centers in the 1950s to instruct dealers in the latest methods of servicing new vehicles and components. GM also operates a fleet of over one hundred mobile training units that extend training right into the dealerships.

Warranty work has become a multibillion-dollar business in the auto

^aIncludes Renault

^bIncludes VW

industry. The manufacturers have introduced numerous monitoring and incentive mechanisms to promote efficient service. Warranty payments, for example, are based on allowable repair times to prevent excessive charges, which dealers would simply pass on to manufacturers.

Despite elaborate and extensive monitoring, enforcement, assistance, information, and incentive mechanisms within the franchise system, the hallmark of the automobile distribution system remains the independently owned and operated dealership. The manufacturers did not attempt to centralize distribution through factory-owned outlets which, in many respects, would have greatly simplified the distribution channel and the complex relationship between manufacturers and dealers. Why?

CHANGES IN THE STRUCTURE OF THE AUTOMOBILE INDUSTRY

The major changes which occurred in the automobile distribution system were accompanied by fundamental changes in the structure of the automobile industry. From 1900 to 1920, over six hundred companies attempted to produce an automobile. Most were small, undercapitalized companies that never produced more than a few vehicles, despite the phenomenal sales growth during this period. Auto production increased from about 4,000 vehicles in 1900 to over 1.9 million by 1920. The strong, largely cash, and largely recreational demand for automobiles continuously exceeded the supply, so that the primary distribution problem was getting enough cars to the dealers.

The number of dealers also increased dramatically into the twenties, spurred on by the great consumer demand and the relative directness of the manufacturer-dealer relationship. The technological simplicity of the early automobiles limited the need for large investments in specialized service and warranty facilities and equipment. Short production lead times and straightforward consumer demand for basic transportation also limited the need for long-term demand forecasting and consumer research. There were also relatively few used cars, so that dealers did not have to handle trade-ins when selling new cars as they normally do today. With steadily increasing sales and limited service obligations, car and parts inventory problems were minimal, and, because models did not change from year to year, no end-of-year clearance was necessary. Under these conditions, consumer demand could be satisfied with a simple distribution channel in which manufacturerdealer relationships were spelled out on a single page.

The phenomenal growth in demand did not continue after 1920,

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1907-8 OLDSMOBILE DEALERSHIP

This early dealership, with its inventory of straight- and curved-dash Oldsmobiles displayed on the street, shows the limited capital investment in showroom and service and repair facilities required at the turn of the century. (Photograph courtesy of Oldsmobile Division, General Motors Corporation.)

however; the output of passenger cars declined sharply in 1921, and then fluctuated throughout the remainder of the prewar period. Production of 3,179,385 passenger cars in 1940 was still below the output in 1925. The inevitable result of this slowing of demand growth was summarized by Alfred P. Sloan, Jr.: "Between 1923–29 the leveling of demand for new cars logically resulted in a change of emphasis in the industry from production to distribution. On the sales end that meant a change from easy selling to hard selling. Dealer problems of an entirely new nature began to arise." Production capacity now exceeded demand; yet the large manufacturers needed to maintain high volume in order to produce efficiently. Production levels became a source of conflict, with manufacturers wanting to produce more cars than dealers believed they could profitably sell. Further, demand was rapidly changing from first-car to replacement-car demand. By 1929, dealers were handling more used than new cars, and as a result each sale be-

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MODERN CADILLAC DEALERSHIP

This 1980s Cadillac dealership shows the substantial changes in dealer facilities necessitated by the increasing sophistication of customer demands for performance, reliability, comfort, and style; by the growing technological complexity of the vehicle; and by the increasing scope of the dealers' functions, including inspection and makeready, sales promotion and product demonstration, acceptance of trade-ins, and repair, recall, and warranty services. (Photograph courtesy of Consumer Sales and Service Staff, General Motors Corporation.)

came a unique trading proposition. Consumers also began demanding greater vehicle performance, comfort, and reliability as the automobile became the primary means of personal mobility rather than a recreational vehicle used mainly on weekends.

These changes in consumer demand greatly increased the importance of dealer service and warranty coverage. The growing importance of styling in the 1920s and the introduction of the annual model change also created new inventory problems, particularly at the end of the year, when new models were introduced. These changes made accurate information about consumer preferences and future purchase plans essential to product planning. At the same time, the demand for greater reliability and performance, and the technological advances that provided them, substantially increased production lead times—

which further increased the importance of long-range demand forecasting. These changes greatly augmented the cost, complexity, capital investment, and scope of the dealers' participation. To the established selling role were added functions like inspection and make-ready, sales promotion, acceptance of trade-ins, repair, and recall and warranty services.

ECONOMIC THEORY

The franchise distribution system is not the product of a grand plan. It is the cumulative result of auto manufacturer responses to specific distribution problems created by changing economic conditions as the industry matured. The challenge for business history research is to impose an analytical framework on the historical evolution of the industry that will explain the relationships between changes in the industry and the development of the distribution channel. Such a framework is outlined here to illustrate how theory and history can be combined in future distribution-channel research to explain these relationships.

The distribution system in any industry must be organized to ensure that all consumer demands for goods, delivery, information, and service are met. The actions of manufacturers, jobbers, wholesalers, and retailers must be highly coordinated to meet these demands effectively. The structure of the distribution channel necessary to provide this coordination depends primarily on the level of market uncertainty and the degree of interdependence among the members of the channel.

Coordination is relatively easy to achieve in static or predictable markets with little interdependence between manufacturers and dealers. In these circumstances, a fairly simple distribution system characterized by short-term relationships covering little more than prices and quantities is sufficient; the distribution channel is simply a series of market exchanges beginning with the manufacturer and ending with the final consumer. In markets characterized by substantial uncertainty and manufacturer-dealer interdependence, however, a much more complex distribution system is necessary to obtain the coordination necessary to satisfy consumer demands.

The changes in the structure of the automobile industry between 1920 and 1950 substantially increased market uncertainty and manufacturer-dealer interdependence. As a result, the relatively simple distribution system in existence in the 1920s could no longer deliver the coordination necessary to meet increasingly diverse and sophisticated consumer demands for products and services.

The level of uncertainty in the industry escalated with widening fluctuations in sales, the introduction of annual model changes, longer production lead times, and the growth of consumer demands for performance, reliability, and comfort. At the same time, the interdependence between manufacturers and dealers grew with the size of the dealers' financial investments in specialized distribution facilities; with the importance of dealer repair and warranty services; with the higher level of retail promotion necessary to counteract the drop in demand growth; and with the increasing role of dealers as a source of market information as consumer demands became harder to predict, especially by those removed from immediate consumer contact.

The inability to coordinate the distribution of automobiles through simple market exchange in this uncertain and interdependent environment led to the introduction of the numerous internal monitoring, enforcement, and incentive mechanisms described above. Market forecasts and ten-day sales reports, for example, provided a common information base for coordinated planning at both the manufacturing and the retail level. 4 The growing interdependence between manufacturers and dealers magnified the impact of each channel member's decisions on the profits of the others. The manufacturers responded to this situation by assuming some of the increased risk to the dealers: by guaranteeing repurchase of unused parts, signs, and equipment upon termination, and by providing allowances on unsold cars.⁵

The difficulty of achieving coordination under conditions of substantial uncertainty and interdependence also explains the continued reliance on the independent dealer as the pillar of the distribution channel. The acceptance of trade-ins made every sales transaction unique and greatly complicated the price and profit calculations, which in-

⁴ This growing uncertainty increased the importance of a common data base, as illustrated by the 1924 inventory crisis in the auto industry, which led to the introduction of the ten-day sales reports.

The big gap in our information system at headquarters and in the divisions was at the retail level. We knew how many cars and trucks our divisions were selling to our dealers, but we did not know the current rate at which those vehicles were being resold to the public. We were not in touch with the actual retail market. The division managers gave me monthly reports on the number of cars in the hands of their dealers, but most of them estimated dealers' inventories without asking the dealers themselves to supply current data. This method—or lack of it—limited our sensitivity to changing market trends and required the staff at headquarters to base its sales forecasts on figures that were not only weak, but several weeks old. Such a time lag could be dangerous. It became, in fact, the source of a new crisis, (Sloan, General Motors, 129).

⁵ As described by General Motors in the 1920s, these allowances on unsold cars ensured that manufacturing managers would not make decisions that ignored the interdependencies with dealers by putting more of the risks of excessive production on the plants:

This policy [of carry-over allowances on unsold cars], I believe, was new in the industry when we began it. It reflected our desire to protect dealers against unreasonable production schedules in the latter months of the model year on the management of the divisions. It imposed a penalty on the factory in the form of an automatic assessment if for any reason there was an excess supply of cars in the model year. (Sloan, General Motors, 286).

volved the net effect of the new-car sale and the subsequent sale of the trade-in. Standard procedures could not be used to provide the coordination needed for effective centralized decision making. Moreover, decisions had to be made quickly to provide the on-the-spot flexibility needed when negotiating with customers about prices and terms of delivery. The information-processing and internal communications systems necessary for the rapid coordination of these millions of unique transactions lay far beyond the capabilities of the manufacturers, who therefore left these decisions with independent dealers, who individually negotiated prices and other terms with their customers.

CONCLUSION

This brief sketch of the historical development of the distribution system in the automobile industry has outlined an analytical framework for relating economic changes in the industry to changes in the distribution channel. This framework suggests that the franchise system is the result of automobile manufacturers' efforts to provide necessary channel coordination as economic changes in the industry increased market uncertainty and manufacturer-dealer interdependence. This analytical framework can be used to interpret the historical development of the distribution system, not only for automobiles, but for other industries as well.